231781

RECORD OF COMMUNICATION

REGIONAL SAMPLE CONTROL CENTER

ROC #4

DATE: 1/16/2008

TDF# 08-0210

SUBJECT: CLP Data Package for Quality Assurance Review

FROM: Hazardous Waste Support Section (HWSS)/RSCC

TO: HWSS ESAT-TOPO

Attached is the following ORGANIC Data Package to be reviewed for Quality Assurance

SITE: Cornell Dubilier **CASE #: 37088**

SDG#: B4JE5, B4J91, B4JH2 **SAMPLER: W-RST**

PROJ. CODE: RS SITE SPILL #: GZ	**#SAMPLES**	**MATRIX**
LAB: MITKEM OPERABLE UNIT: 00	**60**	**Soil**
TURN-AROUND-TIME: 21 day		
CERCLIS ID # : NJD981557879	**FRACTION:**	**PCBs**

Contaminant(s) of Concern (If known)

REGION II RSCC DATA TRANSFER LOG

Relinquished By		**Received By**	
Signature	**Date/Time**	**Signature**	**Date/Time**
Robert Feld	2/4/08 8:15 AM	Deana Christine Gillin	2/4/08 8:45 AM
Deana Christine Gillin 2/4/08		Yvonne Purcell	02/04/08 4:00 PM
Yvonne Purcell 2/4/08	9:20 AM	Robert Feld 2/14/08	9:20 AM
Robert Feld 2/14/08	10:45 AM	R Amon 2/14/08	10:45 AM
R Amon 2/14/08	2:20	Robert Feld 2/14/08	2:20 PM
Robert Feld 2/14/08	2:30 PM	Michelle J. Peña 2/14/08	2:30 PM
Michelle J. Peña 2/14/08	3:15 PM	Robert Feld 2/14/08	3:15 PM

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-13A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8390F.D/E2G8390R.D

% Moisture: 32 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	190	U
11104-28-2	Aroclor-1221	190	U
11141-16-5	Aroclor-1232	190	U
53469-21-9	Aroclor-1242	190	U
12672-29-6	Aroclor-1248	190	U
11097-69-1	Aroclor-1254	15000 ~~12000~~	~~E~~ C *KL 1/8/8
11096-82-5	Aroclor-1260	190	U
37324-23-5	Aroclor-1262	190	U
11100-14-4	Aroclor-1268	190	U

* TRANSFERED FROM B4JJ5DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-14A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8392F.D/E2G8392R.D

% Moisture: 34 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	12000 ~~9200~~	~~P~~C KC 1/8/08
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

* TRANSFERED FROM B4JJ6 DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-15A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8394F.D/E2G8394R.D

% Moisture: 32 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	950	U
11104-28-2	Aroclor-1221	950	U
11141-16-5	Aroclor-1232	950	U
53469-21-9	Aroclor-1242	950	U
12672-29-6	Aroclor-1248	950	U
11097-69-1	Aroclor-1254	62000 ~~44000~~	~~E~~ C
11096-82-5	Aroclor-1260	950	U
37324-23-5	Aroclor-1262	950	U
11100-14-4	Aroclor-1268	950	U

KL 1/8/08 *

* TRANSFERRED FROM B4JJ7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-16A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8345F.D/E2G8345R.D

% Moisture: 45 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	60	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	5500 ~~3200~~	~~EC~~ KL 1/8/08 *
11096-82-5	Aroclor-1260	60	U
37324-23-5	Aroclor-1262	60	U
11100-14-4	Aroclor-1268	60	U

* TRANSFERED FROM B4JJ8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-17A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8346F.D/E2G8346R.D

% Moisture: 40 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	5600 ~~3500~~	~~E~~ JC KC 1/18/08*
11096-82-5	Aroclor-1260	55	U
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

* TRANSFERED FROM B4JJ9 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-18A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8347F.D/E2G8347R.D

% Moisture: 36 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	2800 ~~1900~~	~~P~~ J *
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

* TRANSFERED FROM B4JK0DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-20A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8397F.D/E2G8397R.D

% Moisture: 27 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	900	U
11104-28-2	Aroclor-1221	900	U
11141-16-5	Aroclor-1232	900	U
53469-21-9	Aroclor-1242	900	U
12672-29-6	Aroclor-1248	900	U
11097-69-1	Aroclor-1254	58000 ~~43000~~	EC KL 1/8/08 *
11096-82-5	Aroclor-1260	900	U
37324-23-5	Aroclor-1262	900	U
11100-14-4	Aroclor-1268	900	U

* TRANSFERED FROM B4JK2DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-19A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8396F.D/E2G8396R.D

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 40.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1700	U
11104-28-2	Aroclor-1221	1700	U
11141-16-5	Aroclor-1232	1700	U
53469-21-9	Aroclor-1242	1700	U
12672-29-6	Aroclor-1248	1700	U
11097-69-1	Aroclor-1254	180000 ~~140000~~	~~P~~C KL 1/10/08*
11096-82-5	Aroclor-1260	1700	U
37324-23-5	Aroclor-1262	1700	U
11100-14-4	Aroclor-1268	1700	U

* TRANSFERED FROM B4JK9 DL.

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH8MS(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-07AMS

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8335F.D

% Moisture: 55 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1200	~~P~~ J
11104-28-2	Aroclor-1221	72	U J
11141-16-5	Aroclor-1232	72	U J
53469-21-9	Aroclor-1242	72	U J
12672-29-6	Aroclor-1248	72	U J
11097-69-1	Aroclor-1254	2900	~~P~~ J
11096-82-5	Aroclor-1260	2200	~~P~~ J
37324-23-5	Aroclor-1262	72	U J
11100-14-4	Aroclor-1268	72	U J

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH8MSD(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-07AMSD

Sample wt/vol: 30 (g/mL) G Lab File ID: E2G8336F.D

% Moisture: 55 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1300 ~~1500~~	J
11104-28-2	Aroclor-1221	73	U
11141-16-5	Aroclor-1232	73	U
53469-21-9	Aroclor-1242	73	U
12672-29-6	Aroclor-1248	73	U
11097-69-1	Aroclor-1254	3000	J
11096-82-5	Aroclor-1260	2400	J
37324-23-5	Aroclor-1262	73	U
11100-14-4	Aroclor-1268	73	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS2A(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-34074

Sample wt/vol: 30 (g/mL) G Lab File ID: E2G8353F.D

% Moisture: 0.0 Decanted: (Y/N) N Date Received:

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	38 ~~43~~	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	37 ~~43~~	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS2A(2)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-34074

Sample wt/vol: 30 (g/mL) G Lab File ID: E2G8353R.D

% Moisture: 0.0 Decanted: (Y/N) N Date Received:

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	38	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	37	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE5MS(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-01AMS

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E1G3393F.D

% Moisture: 38 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	180 ~~390~~	~~P~~ J
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	6000	~~P~~ J
11096-82-5	Aroclor-1260	3500	~~P~~ J
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE5MSD(1)

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1924-01AMSD

Sample wt/vol: 30.3 (g/mL) G | Lab File ID: E1G3394F.D

% Moisture: 38 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 7.1 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	~~310~~ 180	~~P~~ J
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	4300	~~EP~~ J
11096-82-5	Aroclor-1260	2500	~~P~~ J
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS1P(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-34071

Sample wt/vol: 30 (g/mL) G Lab File ID: E1G3372F.D

% Moisture: 0.0 Decanted: (Y/N) N Date Received:

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	36~~39~~	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	47~~47~~	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-01A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E2G8327F.D/E2G8327R.D

% Moisture: 20 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	1800 ~~840~~	~~EP~~ *
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

* TRANSFERRED FROM B4JH2DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-02A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8329F.D/E2G8329R.D

% Moisture: 26 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	2700 ~~1400~~	~~EP~~ *
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

* TRANSFERED FROM B4JH3 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH4

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1925-03A

Sample wt/vol: 30.0 (g/mL) G | Lab File ID: E2G8379F.D/E2G8379R.D

% Moisture: 37 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 20.0

GPC Cleanup: (Y/N) N | pH: 6.9 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1000	U
11104-28-2	Aroclor-1221	1000	U
11141-16-5	Aroclor-1232	1000	U
53469-21-9	Aroclor-1242	1000	U
12672-29-6	Aroclor-1248	1000	U
11097-69-1	Aroclor-1254	~~81000~~ 99000	~~EC~~ KC 1/8/08 *
11096-82-5	Aroclor-1260	1000	U
37324-23-5	Aroclor-1262	1000	U
11100-14-4	Aroclor-1268	1000	U

* TRANSFERED FROM B4JH4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8380F.D/E2G8380R.D

% Moisture: 22 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	22000 ~~16000~~	~~EC~~ KC 1/8/08 *
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

* TRANSFERED FROM B4JH5DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-05A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8381F.D/E2G8381R.D

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	15000 ~~10000~~	EC KC 1/8/08 *
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

* TRANSFERED FROM B4JH6DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-06A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8382F.D/E2G8382R.D

% Moisture: 34 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	12000 ~~8000~~	~~P~~C KC 1/8/08 *
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

* TRANSFERED FROM B4JH7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH8

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1925-07A

Sample wt/vol: 30.1 (g/mL) G | Lab File ID: E2G8334F.D/E2G8334R.D

% Moisture: 55 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 6.9 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	73	U
11104-28-2	Aroclor-1221	73	U
11141-16-5	Aroclor-1232	73	U
53469-21-9	Aroclor-1242	73	U
12672-29-6	Aroclor-1248	73	U
11097-69-1	Aroclor-1254	4700 ~~2600~~	~~P~~C KC 1/8/08 *
11096-82-5	Aroclor-1260	73	U
37324-23-5	Aroclor-1262	73	U
11100-14-4	Aroclor-1268	73	U

* TRANSFERED FROM B4JH8 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-08A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8337F.D/E2G8337R.D

% Moisture: 56 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	75	U
11104-28-2	Aroclor-1221	75	U
11141-16-5	Aroclor-1232	75	U
53469-21-9	Aroclor-1242	75	U
12672-29-6	Aroclor-1248	75	U
11097-69-1	Aroclor-1254	2200 ~~1400~~	~~P~~ *
11096-82-5	Aroclor-1260	75	U
37324-23-5	Aroclor-1262	75	U
11100-14-4	Aroclor-1268	75	U

* TRANSFERED FROM B4JH9DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-09A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8383F.D/E2G8383R.D

% Moisture: 37 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1000	U
11104-28-2	Aroclor-1221	1000	U
11141-16-5	Aroclor-1232	1000	U
53469-21-9	Aroclor-1242	1000	U
12672-29-6	Aroclor-1248	1000	U
11097-69-1	Aroclor-1254	51000 ~~28000~~	~~EP~~ C J *
11096-82-5	Aroclor-1260	1000	U
37324-23-5	Aroclor-1262	1000	U
11100-14-4	Aroclor-1268	1000	U

* TRANSFERED FROM B4JJ0DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ1

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1925-10A

Sample wt/vol: 30.4 (g/mL) G | Lab File ID: E2G8339F.D/E2G8339R.D

% Moisture: 36 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 6.9 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	2800 ~~1600~~	~~E~~ *
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

* TRANSFERED FROM B4JJ1 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1925-11A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8386F.D/E2G8386R.D

% Moisture: 32 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	24000 ~~16000~~	~~E~~C KC 1/8/08*
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

* TRANSFERED FROM B4JJ3DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JJ4

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JH2

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1925-12A

Sample wt/vol: 30.5 (g/mL) G | Lab File ID: E2G8388F.D/E2G8388R.D

% Moisture: 41 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 20.0

GPC Cleanup: (Y/N) N | pH: 7.0 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	76000 ~~54000~~	~~P~~ KC 1/8/08 *
11096-82-5	Aroclor-1260	1100	U
37324-23-5	Aroclor-1262	1100	U
11100-14-4	Aroclor-1268	1100	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-09A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E1G3489F.D/E1G3489R.D

% Moisture: 33 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	150	U
11104-28-2	Aroclor-1221	150	U
11141-16-5	Aroclor-1232	150	U
53469-21-9	Aroclor-1242	150	U
12672-29-6	Aroclor-1248	150	U
11097-69-1	Aroclor-1254	9300 ~~7600~~	~~E~~ J *
11096-82-5	Aroclor-1260	150	U
37324-23-5	Aroclor-1262	150	U
11100-14-4	Aroclor-1268	150	U

* VALUE TRANSFERRED FROM B4JG0DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-10A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E1G3403F.D/E1G3403R.D

% Moisture: 17 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

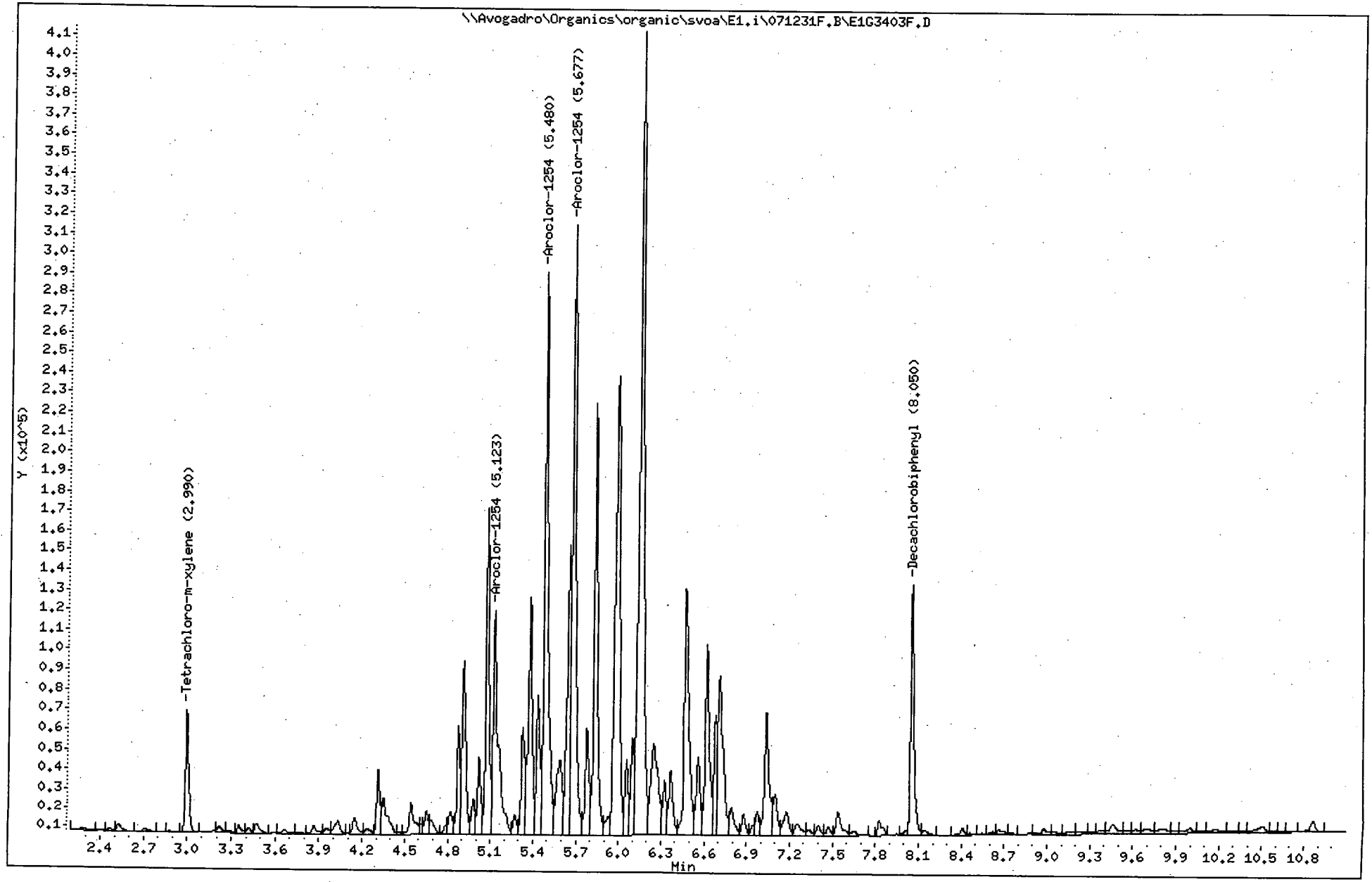
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	1700 ~~1200~~	E J *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

* VALUE TRANSFERED FROM B4JG1DL

Data File: \\Avogadro\Organics\organic\svoa\E1.i\071231F.B\E1G3403F.D
Date : 31-DEC-2007 20:20
Client ID: B4JG1
Sample Info: F1924-10A,,34071,somaro,sub,,
Volume Injected (uL): 1.0
Column phase: CLPPestII

Instrument: E1.i

Operator: SZ SRC: LIMS
Column diameter: 0.32



1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-11A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3404F.D/E1G3404R.D

% Moisture: 31 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	5300 ~~3400~~	~~P~~ J *
11096-82-5	Aroclor-1260	47	U
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

* TRANSFERED FROM B4JG2 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-12A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E1G3405F.D/E1G3405R.D

% Moisture: 32 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	5700 ~~3700~~	~~P~~ J *
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

* VALUE TRANSFERD FROM B4JG3DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-13A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3461F.D/E1G3479R.D

% Moisture: 61 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	~~4800~~ 7000	~~EP~~ J *
11096-82-5	Aroclor-1260	84	U
37324-23-5	Aroclor-1262	84	U
11100-14-4	Aroclor-1268	84	U

* TRANSFERED FROM B4JG4DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-14A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E1G3467F.D/E1G3467R.D

% Moisture: 53 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	700	U
11104-28-2	Aroclor-1221	700	U
11141-16-5	Aroclor-1232	700	U
53469-21-9	Aroclor-1242	700	U
12672-29-6	Aroclor-1248	700	U
11097-69-1	Aroclor-1254	25000 ~~22000~~	~~E~~ J *
11096-82-5	Aroclor-1260	700	U
37324-23-5	Aroclor-1262	700	U
11100-14-4	Aroclor-1268	700	U

* TRANSFERED FROM B4JG5DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-15A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3468F.D/E1G3468R.D

% Moisture: 31 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	470	U
11104-28-2	Aroclor-1221	470	U
11141-16-5	Aroclor-1232	470	U
53469-21-9	Aroclor-1242	470	U
12672-29-6	Aroclor-1248	470	U
11097-69-1	Aroclor-1254	23000 ~~23000~~	~~E~~ J *
11096-82-5	Aroclor-1260	470	U
37324-23-5	Aroclor-1262	470	U
11100-14-4	Aroclor-1268	470	U

* TRANSFERRED FROM B4JG6DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-16A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3469F.D/E1G3469R.D

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	510	U
11104-28-2	Aroclor-1221	510	U
11141-16-5	Aroclor-1232	510	U
53469-21-9	Aroclor-1242	510	U
12672-29-6	Aroclor-1248	510	U
11097-69-1	Aroclor-1254	66000 ~~54000~~	~~E~~ J *
11096-82-5	Aroclor-1260	510	U
37324-23-5	Aroclor-1262	510	U
11100-14-4	Aroclor-1268	510	U

* Translated from B1J367DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-17A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E1G3410F.D/E1G3410R.D

% Moisture: 18 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	2400 ~~1600~~	~~P~~ J *
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

* Transfered from B4JG8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JG9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-18A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3411F.D/E1G3411R.D

% Moisture: 29 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	620	~~P~~ J
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-19A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3412F.D/E1G3412R.D

% Moisture: 24 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	1100 ~~810~~	~~EP~~ J *
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

* TRANSFERRED FROM B4JH00L.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JH1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-20A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3462F.D/E1G3462R.D

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	230	J
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE5

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1924-01A

Sample wt/vol: 30.3 (g/mL) G | Lab File ID: E1G3392F.D/E1G3392R.D

% Moisture: 38 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 7.1 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	4600 ~~3100~~	~~E~~ ★ J
11096-82-5	Aroclor-1260	53	U
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

★ TRANSFERRED FROM B4JE5DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-02A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E1G3395F.D/E1G3395R.D

% Moisture: 39 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	1300 ~~1000~~	~~EP~~ J
11096-82-5	Aroclor-1260	54	U
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

TRANSFERRED FROM B4JF3 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-03A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3450F.D/E1G3460R.D

% Moisture: 24 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	4300	U
11104-28-2	Aroclor-1221	4300	U
11141-16-5	Aroclor-1232	4300	U
53469-21-9	Aroclor-1242	4300	U
12672-29-6	Aroclor-1248	4300	U
11097-69-1	Aroclor-1254	190000 ~~150000~~	~~EP~~ * J
11096-82-5	Aroclor-1260	4300	U
37324-23-5	Aroclor-1262	4300	U
11100-14-4	Aroclor-1268	4300	U

* TRANSFERRED FROM B4JF4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-04A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3397F.D/E1G3397R.D

% Moisture: 54 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/31/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	71	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	5700 ~~3500~~	E * J
11096-82-5	Aroclor-1260	71	U
37324-23-5	Aroclor-1262	71	U
11100-14-4	Aroclor-1268	71	U

* TRANSFERRED FROM B4JF5DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-05A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3463F.D/E1G3463R.D

% Moisture: 43 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	11000 ~~9200~~	~~EP~~ J *
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

* TRANSFERRED FROM B4JF6DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-06A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E1G3464F.D/E1G3464R.D

% Moisture: 46 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	600	U
11104-28-2	Aroclor-1221	600	U
11141-16-5	Aroclor-1232	600	U
53469-21-9	Aroclor-1242	600	U
12672-29-6	Aroclor-1248	600	U
11097-69-1	Aroclor-1254	18000~~15000~~	~~EP~~ J *
11096-82-5	Aroclor-1260	600	U
37324-23-5	Aroclor-1262	600	U
11100-14-4	Aroclor-1268	600	U

* TRANSFERRD FROM B4JF7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-07A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3465F.D/E1G3465R.D

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	500	U
11104-28-2	Aroclor-1221	500	U
11141-16-5	Aroclor-1232	500	U
53469-21-9	Aroclor-1242	500	U
12672-29-6	Aroclor-1248	500	U
11097-69-1	Aroclor-1254	34000~~34000~~	~~P~~ J *
11096-82-5	Aroclor-1260	500	U
37324-23-5	Aroclor-1262	500	U
11100-14-4	Aroclor-1268	500	U

* Value is same as B4JF8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JE5

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1924-08A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3466F.D/E1G3466R.D

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/02/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	510	U
11104-28-2	Aroclor-1221	510	U
11141-16-5	Aroclor-1232	510	U
53469-21-9	Aroclor-1242	510	U
12672-29-6	Aroclor-1248	510	U
11097-69-1	Aroclor-1254	11000 ~~10000~~	~~P~~ J *
11096-82-5	Aroclor-1260	510	U
37324-23-5	Aroclor-1262	510	U
11100-14-4	Aroclor-1268	510	U

* Value Transferred From B4JF9DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-20A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8424F.D/E2G8424R.D

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	5000 ~~3500~~	E *
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

* TRANSFERED FROM B4JB0DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ABLK2B

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: MB-34052

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8401F.D/E2G8401R.D

% Moisture: Decanted: (Y/N) N Date Received:

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA0MS(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-10AMS

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8486F.D

% Moisture: 27 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 8.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1800	J
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	18000	~~P~~
11096-82-5	Aroclor-1260	12000	~~P~~ J
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA0MSD(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-10AMSD

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E2G8487F.D

% Moisture: 27 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 8.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	2500	J
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	22000	~~P~~
11096-82-5	Aroclor-1260	15000	~~P~~ J
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

1H - FORM I PEST

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ALCS2B(1)

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: LCS-34052

Sample wt/vol: 30 (g/mL) G Lab File ID: E2G8439F.D

% Moisture: 0.0 Decanted: (Y/N) N Date Received:

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	31 ~~31~~	J *
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	29 ~~38~~	~~P~~ J *
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

* TRANSFERRED FROM REAR COLUMN

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J91

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-01A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8403F.D/E2G8403R.D

% Moisture: 17 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	2100 ~~1200~~	~~E~~ *
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

* TRANSFERRED FROM B4J91DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J92

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-02A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8463F.D/E2G8463R.D

% Moisture: 32 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	480	U
11104-28-2	Aroclor-1221	480	U
11141-16-5	Aroclor-1232	480	U
53469-21-9	Aroclor-1242	480	U
12672-29-6	Aroclor-1248	480	U
11097-69-1	Aroclor-1254	35000 ~~26000~~	E *
11096-82-5	Aroclor-1260	480	U
37324-23-5	Aroclor-1262	480	U
11100-14-4	Aroclor-1268	480	U

* TRANSFERRED FROM B4J92DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J93

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-03A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8466F.D/E2G8466R.D

% Moisture: 22 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	170	U
12672-29-6	Aroclor-1248	170	U
11097-69-1	Aroclor-1254	14000 ~~7000~~	~~EP~~ *
11096-82-5	Aroclor-1260	170	U
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

* TRANSFERRED FROM B4J93 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J94

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-04A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8467F.D/E2G8467R.D

% Moisture: 24 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	170	U
12672-29-6	Aroclor-1248	170	U
11097-69-1	Aroclor-1254	13000 ~~8800~~	~~P~~ *
11096-82-5	Aroclor-1260	170	U
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

* TRANSFERED FROM B4J94DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J95

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-05A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8407F.D/E2G8407R.D

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	410	~~P~~ J
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J96

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8408F.D/E2G8408R.D

% Moisture: 36 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	52	U
11097-69-1	Aroclor-1254	1700 ~~1200~~	~~E~~ *
11096-82-5	Aroclor-1260	52	U
37324-23-5	Aroclor-1262	52	U
11100-14-4	Aroclor-1268	52	U

* TRANSFERRED FROM B4J96DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J97

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-07A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8468F.D/E2G8468R.D

% Moisture: 24 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	26000 ~~15000~~	~~E~~ *
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

* TRANSFERRED FROM B4J97DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J98

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-08A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E2G8410F.D/E2G8410R.D

% Moisture: 16 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	4500 ~~2900~~	~~E~~ *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

* TRANSFERRED FROM B4J98DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4J99

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-09A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E2G8469F.D/E2G8469R.D

% Moisture: 24 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	430	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	31000 ~~17000~~	E *
11096-82-5	Aroclor-1260	430	U
37324-23-5	Aroclor-1262	430	U
11100-14-4	Aroclor-1268	430	U

* TRANSFERED FROM B4J99DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-10A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8470F.D/E2G8470R.D

% Moisture: 27 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 8.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	27000 ~~17000~~	~~P~~ *
11096-82-5	Aroclor-1260	360	U
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

* TRANSFERED FROM B4J40DL

2nd

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-11A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8415F.D/E2G8415R.D

% Moisture: 15 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	2300 ~~1300~~	~~E~~ *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

* TRANSFERRED FROM B4JA1DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-12A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8471F.D/E2G8471R.D

% Moisture: 34 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 5.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	18000 ~~11000~~	E *
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

* TRANSFERED FROM B4JA2DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-13A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8452F.D/E2G8452R.D

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	50	U J
11104-28-2	Aroclor-1221	50	U J
11141-16-5	Aroclor-1232	50	U J
53469-21-9	Aroclor-1242	50	U J
12672-29-6	Aroclor-1248	50	U J
11097-69-1	Aroclor-1254	5300 ~~3700~~	✓ *
11096-82-5	Aroclor-1260	50	U J
37324-23-5	Aroclor-1262	50	U J
11100-14-4	Aroclor-1268	50	U J

* TRANSFERED FROM B4JA3 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-14A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8472F.D/E2G8472R.D

% Moisture: 34 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	98	U
11104-28-2	Aroclor-1221	98	U
11141-16-5	Aroclor-1232	98	U
53469-21-9	Aroclor-1242	98	U
12672-29-6	Aroclor-1248	98	U
11097-69-1	Aroclor-1254	10000 ~~7100~~	~~P~~ *
11096-82-5	Aroclor-1260	98	U
37324-23-5	Aroclor-1262	98	U
11100-14-4	Aroclor-1268	98	U

* TRANSFERED FROM B4JA4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-15A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8419F.D/E2G8419R.D

% Moisture: 21 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	1600 ~~1200~~	~~U~~ *
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* TRANSFERED FROM B4JA5DL.

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-16A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8420F.D/E2G8420R.D

% Moisture: 41 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	340	P J
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	390	
11096-82-5	Aroclor-1260	55	U
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-17A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8473F.D/E2G8473R.D

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	87	U
11104-28-2	Aroclor-1221	87	U
11141-16-5	Aroclor-1232	87	U
53469-21-9	Aroclor-1242	~~4400~~ 7000	~~P~~ *
12672-29-6	Aroclor-1248	87	U
11097-69-1	Aroclor-1254	~~2700~~ 4000	~~P~~ *
11096-82-5	Aroclor-1260	87	U
37324-23-5	Aroclor-1262	87	U
11100-14-4	Aroclor-1268	87	U

* TRANSFERED FROM B4JA7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-18A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8474F.D/E2G8474R.D

% Moisture: 27 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	90	U
11104-28-2	Aroclor-1221	90	U
11141-16-5	Aroclor-1232	90	U
53469-21-9	Aroclor-1242	~~4200~~ 7800	~~P~~ *
12672-29-6	Aroclor-1248	90	U
11097-69-1	Aroclor-1254	~~4200~~ 6600	~~P~~ *
11096-82-5	Aroclor-1260	90	U
37324-23-5	Aroclor-1262	90	U
11100-14-4	Aroclor-1268	90	U

* TRANSFERED FROM B4JA8 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JA9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4J91

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1911-19A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8475F.D/E2G8475R.D

% Moisture: 24 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	170	U
12672-29-6	Aroclor-1248	170	U
11097-69-1	Aroclor-1254	15000 ~~10000~~	~~U~~ *
11096-82-5	Aroclor-1260	170	U
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

* TRANSFERED FROM B4JA9 DL.

Functional Guidelines for Evaluating Organic Analysis

CASE No.:37088
LABORATORY: MITKEM
SAMPLER: W-RST

SDG No.: B4J91
SITE: Cornell Dubilier
ANALYSIS: PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1) August 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material), "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Vyomesh Parekh — Date: February /13 /2008

Peer Reviewer's Signature: _____ — Date: 2 /13/2008

Verified By: _____ — Date: 2 /14 /2008

SDG# B4J91

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

The following Aroclor samples have surrogate percent recoveries that are greater than 200% Detected compounds are qualified J. Nondetected compounds are not qualified.

Decachlorobiphenyl B4J97

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

The following aroclor samples have surrogate percent recoveries which exceed the primary maximum criteria but are less than or equal to the expanded maximum criteria. Detected compounds are qualified J. Nondetected compounds are not qualified.

Decachlorobiphenyl B4J93

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

The following aroclor samples have surrogate percent recoveries less than the expanded minimum criteria but greater than or equal to 10%. Detected compounds are qualified J. Nondetected compounds are qualified UJ.

Decachlorobiphenyl B4JA3

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JA0, B4JA0MS, B4JA0MSD

Aroclor-1016 B4JA0, B4JA0MS, B4JA0MSD

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JA0, B4JA0MS, B4JA0MSD

Aroclor-1016 B4JA0, B4JA0MS, B4JA0MSD

4. Laboratory Control Samples (LCS):

The LCSs data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems found for this qualification.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U.

The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No problems found for this qualification.

B) Field or rinse blank contamination:

Not applicable.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) **Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):**

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 15% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

The following aroclor samples are associated with an opening CCV that is not analyzed at the correct frequency. Detected compounds are qualified J.

Aroclor-1242 B4JA6

7. **COMPOUND IDENTIFICATION:**

A) **PCB Fraction:**

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1254 B4J93, B4J95

Aroclor-1242 B4JA6, B4JA8

Aroclor-1260 ALCS2B

7. **CONTRACT PROBLEMS NON-COMPLIANCE:**

8. **FIELD DOCUMENTATION:**

9. **OTHER PROBLEMS:**

Aroclor, other than those reported may be present in some of the samples.

10. **This package contains re-extracted, re-analyzed or dilution runs. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.**

B4J91DL, B4J92DL, B4J93DL, B4J96DL, B4J97DL, B4JA1DL, B4JA4DL, B4JA4DL, B4JA5DL, B4JA9DL, B4JB0DL, B4JA3DL, B4J98DL, B4J94DL, B4J99DL, B4JA0DL, B4JA2DL, B4JA7DL, B4JA8DL, B4JA0MSD

Functional Guidelines for Evaluating Organic Analysis

CASE No.:37088
LABORATORY: MITKEM
SAMPLER: W-RST

SDG No.: B4JH2
SITE: Corrnell Dubilier
ANALYSIS: PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1) August 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material), "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Vyomesh Parekh — **Date:** February /13 /2008

Peer Reviewer's Signature: C. Stanis — **Date:** 2 /13 /2008

Verified By: R Amaro — **Date:** 2 /14 /2008

SDG# B4JH2

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

The following aroclor samples have surrogate percent recoveries less than the expanded minimum criteria. Detected compounds are qualified J. Nondetected compounds are qualified UJ.

Decachlorobiphenyl B4JH8MS.

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1016 B4JH8, B4JH8MS, B4JH8MSD

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JH8, B4JH8MS, B4JH8MSD

Aroclor-1016 B4JH8, B4JH8MS, B4JH8MSD

4. Laboratory Control Samples (LCS):

The LCSs data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems found for this qualification

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U.

The following analytes in the sample shown were qualified with "U" for these reasons:

A) **Method blank contamination:**

No problems found for this qualification.

B) **Field or rinse blank contamination:**

Not applicable.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) **Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):**

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 15% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

No problems found for this qualification.

7. COMPOUND IDENTIFICATION:

A) **PCB Fraction:**

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1254 B4JH2, B4JH3, B4JJ0DL, B4JK0DL

The following aroclor samples have percent differences between analyte results in the range of 71-100%. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1254 B4JJ0

8. **CONTRACT PROBLEMS NON-COMPLIANCE:**

9. **FIELD DOCUMENTATION:**

10. **OTHER PROBLEMS:**

Aroclor, other than those reported may be present in some of the samples.

11. **This package contains re-extracted, re-analyzed or dilution runs. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.**

B4JH2DL, B4JH3DL, B4JH4DL, B4JH5DL, B4JH6DL, B4JH7DL, B4JH8DL, B4JH9DL, B4JJ0DL, B4JJ1DL, B4JJ3DL, B4JJ4DL, B4JJ5DL, B4JJ6DL, B4JJ7DL, B4JJ8DL, B4JJ9DL, B4JK0DL, B4JK2DL, B4JK9DL,

Functional Guidelines for Evaluating Organic Analysis

CASE No.:37088	**SDG No.: B4JE5**
LABORATORY: MITKEM	**SITE: Cornell Dubilier**
SAMPLER: W-RST	**ANALYSIS: PCB**

DATA ASSESSMENT

The current SOP HW-37 (Revision 1) August 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material), "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Vyomesh Parekh — **Date:** February /13 /2008

Peer Reviewer's Signature: C. Stanco — **Date:** 2 /13 /2008

Verified By: R Amore — **Date:** 2 /14 /2008

SDG# B4JE5

1. **HOLDING TIME:**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

No problems found for this qualification.

2. **SURROGATES**

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems found for this qualification.

3. **MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:**

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JE5, B4JE5MS, B4JE5MSD

Aroclor-1060 B4JE5, B4JE5MS, B4JE5MSD

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JE5, B4JE5MS, B4JE5MSD

Aroclor-1016 B4JE5, B4JE5MS, B4JE5MSD

4. **Laboratory Control Samples (LCS):**

The LCSs data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems found for this qualification.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U.

The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No problems found for this qualification.

B) Field or rinse blank contamination:

Not applicable.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 15% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

The following aroclor samples are associated with an opening CCV that is not analyzed at the correct frequency. Detected compounds are qualified J.

Aroclor-1254 B4JE5, B4JE5DL,B4JF3,B4JF3DL, B4JF4, B4JF4DL, B4JF5, B4JF5DL, B4JF6, B4JF6DL, B4JF7, B4JF7DL, B4JF8, B4JF8DL, B4JF9, B4JF9DL, B4JG0, B4JG0DL, B4JG1, B4JG1DL, B4JG2, B4JG2DL, B4JG3, B4JG3DL, B4JG4, B4JG4DL, B4JG5, B4JG5DL, B4JG6,

B4JG6DL, B4JG7, B4JG7DL, B4JG8, B4JG8DL, B4JG9, B4JH0, B4JH0DL, B4JH1, B4JE5MS, B4JE5MSD,.

7. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J.

Aroclor-1254 B4JE5DL, B4JE5MSD, B4JF3, B4JF3DL, B4JF4, B4JF4DL, B4JF5DL, B4JF6, B4JF6DL, B4JF7, B4JF7DL, B4JF8DL, B4JF9, B4JF9DL, B4JG0DL, B4JG1DL, B4JG2, B4JG3, B4JG3DL, B4JG4DL, B4JG6DL, B4JG9, B4JH0, B4JH0DL

Aroclor-1016 B4JE5MSD

The following aroclor samples have percent differences between analyte results in the range of 101-200%. Detected compounds are qualified J.

Aroclor-1016 B4JE5MS

Aroclor-1254 B4JG4

8. CONTRACT PROBLEMS NON-COMPLIANCE:

9. FIELD DOCUMENTATION:

10. OTHER PROBLEMS:

Aroclor other than those reported may be present in some of the samples.

11. This package contains re-extracted, re-analyzed or dilution runs. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

B4JE5DL,B4JF3DL,B4JF4DL,B4JF5DL,B4JF6DL,B4JF7DL,B4JF8DL,B4JF9DL,B4JG0DL, B4JG1DL, B4JG2DL, B4JG3DL, B4JG4DL,B4JG5DL, B4JG6DL, B4JG7DL, B4JG8DL, B4JH0DL

SOP HW-37
Revision 1
August 2007

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.2

Prepared by: George Karras Date: 8/13/07
George Karras, Chemist
Hazardous Waste Support Section

Peer Reviewed by: Russell Arnone Date: 10/3/07
Russell Arnone, Chemist
Hazardous Waste Support Section

Concurred by: Linda M. Mauel Date: 10/9/07
Linda Mauel, Chief
Hazardous Waste Support Section

Approved by: Robert Runyon Date: 10/10/07
Robert Runyon, Chief
Hazardous Waste Support Branch

Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.2, February 2007". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.2 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 **LAB:** MITKEM

SITE NAME: Cornell Dubilier **SDG No(s).:** B4JH2

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? ☑ ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? ☑ ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ ☑ ___

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? ☑ ___ ___

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		☑	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1 Is the SDG Narrative or Cover Letter Present?	☑		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

YES NO N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative? [✓] ___ ___

b. Are all forms and copies legible? [✓] ___ ___

c. Assembled in the order set forth in the SOW? [✓] ___ ___

d. All Aroclor Data present? [✓] ___

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded? ___ [✓] ___

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? ☑ ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	[✓]	___	___
ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.			
3.3 Were outliers marked with an asterisk on Form II?	[✓]	___	___
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed?	[ ]	___	[✓]
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO?	[✓]	[ ]	[✓]

R 12/12/08

ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:

Surrogate Compound Recovery Action for Aroclors

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	J	Use Professional Judgement
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ [ ] [✓]

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? [✓] ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? [✓] ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	J	Use professioan judgement
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification	

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? [✓] ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? [✓] ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? [ ] ___ [✓]

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? [✓] ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) [✓] ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

	YES	NO	N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? ☑ ___ ___

ACTION: Use professional judgement to determine the effect on the data.

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? ☒ ___ ☑

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? ___ ☑ ___

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? ___ ☑ ___

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? ___ ☐ ☑

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ X 2/12

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) ☑ ___ ___

* This Form has been used From SDG # B4J91/37088

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	[ ]	* ✓	___
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	[✓]	___	___
d.) Form VII ARO/Aroclor Calibration Verification	[✓]	___	___
e.) Form VIII ARO/Aroclor Analytical Sequence	[✓]	___	___
f.) Form X ARO/Identification Summary for Multicomponent Analysis	[✓]	___	___

7.2 **Initial Calibration**

7.2.1 Was the following contract required initial calibration sequence provided by the laboratory? [✓] ___ ___

Initial Calibration Sequence	
1.	Aroclor 1221 CS3 (400ng/ml)
2.	Aroclor 1232 CS3 (400 ng/ml)
3.	Aroclor 1242 CS3 (400 ng/ml)
4.	Aroclor 1248 CS3 (400 ng/ml)
5.	Aroclor 1254 CS3 (400 ng/ml)
6.	Aroclor 1262 CS3 (400 ng/ml)
7.	Aroclor 1268 CS3 (400 ng/ml)
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

7.3 Are there any transcription/calculation errors between raw data and the Forms? ___ [ ] ✓

ACTION: If large errors exist, take action specified in section 3.1 above.

	YES	NO	N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: ☑ ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? ☑ ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? ☑ ___ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? ☑ ___ ___

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 Continuing Calibration Verification (CCV) (Form VII)

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? ☑ ___ ___

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ☑ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ☑ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ☑ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? 2/12/08 X ___ ✓

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? ☑ ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? [ ] ___ ✓

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? ✓ ___ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? ☑ ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: ☑ ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows, but was reported as

YES NO N/A

non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? [ ] ✓

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? ✓

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? ✓

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%?

[ ] ✓

Action: Reviewer must check columns for peak interferences for the positive hits. Qualify the Arclor (s) according to the following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"

YES NO N/A

> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? [✓] ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? [✓] ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? [ ] ___ [✓]

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? [✓] ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use.

YES NO N/A

Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? ☑ ___ ___

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? ☐ ___ ✓

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.2,February 2007.
2. National Functional Guidelines for Superfund Organic Methods Data Review July 2007.

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.2

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Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

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INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.2, February 2007". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.2 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 **LAB:** MITKEM

SITE NAME: Cornell Dubilier **SDG No(s).:** B4J91

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? [M] ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? [M] ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ [M] ___

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? [M] ___ ___

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		☑	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1 Is the SDG Narrative or Cover Letter Present?	☑		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

YES NO N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative? [✓] ___ ___

b. Are all forms and copies legible? [✓] ___ ___

c. Assembled in the order set forth in the SOW? [✓] ___ ___

d. All Aroclor Data present? [✓] ___

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded? ___ [✓] ___

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? ☑ ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	☑		
ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.			
3.3 Were outliers marked with an asterisk on Form II?	☑		
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed? * Samples are re-analyzed in Dilution and Surrogates are diluted out	* ☑		
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO? * No need to qulify b/c sample run more then 5X Dilution.	* ✓	[ ]	
ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:			

Surrogate Compound Recovery Action for Aroclors

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	J	Use Professional Judgement
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ [ ] [✓]

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? [✓] ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? [✓] ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	J	Use professioan judgement
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification	

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? [✓] ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? [✓] ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? [ ] ___ [✓]

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? [✓] ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) [✓] ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

	YES	NO	N/A
Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.			
5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument?	☑		
ACTION: Use professional judgement to determine the effect on the data.			
5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL?	☑ 10/21/08		✓
ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.			

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.			
6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte?		☑	
Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.			
ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.			
6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs?		☑	
ACTION: Take the action specified in section 6.1.			
6.3 Do any field/rinse blanks have positive Aroclor results?		☐	✓
NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.			
ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated			

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ ✓

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) ✓ ___ ___

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	[✓]	___	___
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	[✓]	___	___
d.) Form VII ARO/Aroclor Calibration Verification	[✓]	___	___
e.) Form VIII ARO/Aroclor Analytical Sequence	[✓]	___	___
f.) Form X ARO/Identification Summary for Multicomponent Analysis	[✓]	___	___

7.2 **Initial Calibration**

7.2.1 Was the following contract required initial calibration sequence provided by the laboratory? [✓] ___ ___

Initial Calibration Sequence	
1.	Aroclor 1221 CS3 (400ng/ml)
2.	Aroclor 1232 CS3 (400 ng/ml)
3.	Aroclor 1242 CS3 (400 ng/ml)
4.	Aroclor 1248 CS3 (400 ng/ml)
5.	Aroclor 1254 CS3 (400 ng/ml)
6.	Aroclor 1262 CS3 (400 ng/ml)
7.	Aroclor 1268 CS3 (400 ng/ml)
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

7.3 Are there any transcription/calculation errors between raw data and the Forms? ___ [ ] [✓]

ACTION: If large errors exist, take action specified in section 3.1 above.

YES NO N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: ☑ ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? ☑ ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? ☑ ___ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? ☑ ___ ___

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 **Continuing Calibration Verification (CCV) (Form VII)**

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? ☑ ___ ___

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ☑ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ☑ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ☑ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? [X] ___ ✓

2/14/08.

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? [✓] ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? [ ] ___ ✓

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? [✓] ___ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? ☑ ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: ☑ ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows, but was reported as

YES NO N/A

non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? ___ [ ] ✓

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? ✓ ___ ___

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? [ ] ___ ✓

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%?

[ ] ✓ ___

Action: Reviewer must check columns for peak interferences for the positive hits. Qualify the Arclor (s) according to the following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"

YES NO N/A

> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? [✓] ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? [✓] ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? [ ] ___ [✓]

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? [✓] ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use.

YES NO N/A

Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? [✓] ___ ___

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? [ ] ___ [✓]

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.2,February 2007.
2. National Functional Guidelines for Superfund Organic Methods Data Review July 2007.

SOP HW-37
Revision 1
August 2007

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.2

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Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.2, February 2007". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.2 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 LAB: MITKEM

SITE NAME: Cornell-Dubilier Electronic site SDG No(s).: B4JE5, ~~B4J91, B4J42~~ 2/13/08

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? [M] ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? [M] ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ [M] ___

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? [M] ___ ___

		YES	NO	N/A
2.3	Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?	___	☑	___

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1	Is the SDG Narrative or Cover Letter Present?	☑	___	___
3.2	Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑	___	___
3.3	Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑	___	___
3.5	Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑	___	___
3.6	Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑	___	___

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

	YES	NO	N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative?	☑		
b. Are all forms and copies legible?	☑		
c. Assembled in the order set forth in the SOW?	☑		
d. All Aroclor Data present?	☑		

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		☑	

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded?		☑	

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? ☑ ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	☑		
ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.			
3.3 Were outliers marked with an asterisk on Form II?	☑		
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed? * Samples are reanalyzed in dilution & surrogates are diluted out. 2/14/08	* ☑		
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO?		☑	
ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:			

Surrogate Compound Recovery Action for Aroclors

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	J	Use Professional Judgement
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ [ ] ✓

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? [✓] ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? [✓] ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	J	Use professioan judgement
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification	

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? ☑ ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? ☑ ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? [ ] ___ ✓

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? ☑ ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) ☑ ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

	YES	NO	N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? ☑ ___ ___

ACTION: Use professional judgement to determine the effect on the data. (Q) 2/12/08

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? ☒ ___ ✓

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? ___ ☑ ___

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? ___ ☑ ___

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? ___ [ ] ✓

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ ✓

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) ✓ ___ ___

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	☑		
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	☑		
d.) Form VII ARO/Aroclor Calibration Verification	☑		
e.) Form VIII ARO/Aroclor Analytical Sequence	☑		
f.) Form X ARO/Identification Summary for Multicomponent Analysis	☑		

7.2 **Initial Calibration**

	YES	NO	N/A
7.2.1 Was the following contract required initial calibration sequence provided by the laboratory?	☑		

Initial Calibration Sequence	
1.	Aroclor 1221 CS3 (400ng/ml)
2.	Aroclor 1232 CS3 (400 ng/ml)
3.	Aroclor 1242 CS3 (400 ng/ml)
4.	Aroclor 1248 CS3 (400 ng/ml)
5.	Aroclor 1254 CS3 (400 ng/ml)
6.	Aroclor 1262 CS3 (400 ng/ml)
7.	Aroclor 1268 CS3 (400 ng/ml)
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

	YES	NO	N/A
7.3 Are there any transcription/calculation errors between raw data and the Forms?		☐	✓

ACTION: If large errors exist, take action specified in section 3.1 above.

	YES	NO	N/A
7.4 Mean Retention Time (RT) and RT Window			
Were the following mean RT and RT window met:	☑		
a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors			
b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.			
ACTION: If no, follow the action as specified in section 3.1.			
7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale?	☑		
ACTION: IF no, take action as specified in section 3.1.			
7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range?	☑		
7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates?	☑		
ACTION: If no, take action as specified in the following Table.			

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 **Continuing Calibration Verification (CCV) (Form VII)**

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? ☑ ___ ___

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ☑ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ☑ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ☑ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? 8/2/08. ✓ — ✓

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? ✓ — —

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? [ ] ___ ✓

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? [✓] ___ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? ✓ ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: ✓ ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows, but was reported as

YES NO N/A

non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? ___ [ ] ✓

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? [✓] ___ ___

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? [ ] ___ ✓

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%?

[ ] ✓ ___

Action: Reviewer must check columns for peak interferences for the positive hits. Qualify the Arclor (s) according to the following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"

YES NO N/A

> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? ☑ ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? ☑ ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? ☐ ___ ☑

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? ☑ ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use.

YES NO N/A

Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? [✓] ___ ___

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? [ ] [✓] ___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.2,February 2007.
2. National Functional Guidelines for Superfund Organic Methods Data Review July 2007.

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4JH2. Analyses were performed for twenty soil samples that were received on December 21, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that three sample-shipping coolers were received. All the coolers were measured at 3°C.

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4JH2	F1925-01A	A
B4JH2DL	F1925-01ADL	A
B4JH3	F1925-02A	A
B4JH3DL	F1925-02ADL	A
B4JH4	F1925-03A	A
B4JH4DL	F1925-03ADL	A
B4JH5	F1925-04A	A
B4JH5DL	F1925-04ADL	A
B4JH6	F1925-05A	A
B4JH6DL	F1925-05ADL	A
B4JH7	F1925-06A	A
B4JH7DL	F1925-06ADL	A
B4JH8	F1925-07A	A
B4JH8DL	F1925-07ADL	A
B4JH8MS	F1925-07AMS	A
B4JH8MSD	F1925-07AMSD	A
B4JH9	F1925-08A	A
B4JH9DL	F1925-08ADL	A
B4JJ0	F1925-09A	A
B4JJ0DL	F1925-09ADL	A
B4JJ1	F1925-10A	A
B4JJ1DL	F1925-10ADL	A
B4JJ3	F1925-11A	A
B4JJ3DL	F1925-11ADL	A
B4JJ4	F1925-12A	A
B4JJ4DL	F1925-12ADL	A
B4JJ5	F1925-13A	A
B4JJ5DL	F1925-13ADL	A
B4JJ6	F1925-14A	A
B4JJ6DL	F1925-14ADL	A

B4JJ7	F1925-15A	A
B4JJ7DL	F1925-15ADL	A
B4JJ8	F1925-16A	A
B4JJ8DL	F1925-16ADL	A
B4JJ9	F1925-17A	A
B4JJ9DL	F1925-17ADL	A
B4JK0	F1925-18A	A
B4JK0DL	F1925-18ADL	A
B4JK9	F1925-19A	A
B4JK9DL	F1925-19ADL	A
B4JK2	F1925-20A	A
B4JK2DL	F1925-20ADL	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = Lower value of two Conc
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception of low recovery of decachlorobiphenyl in one column for samples B4JH8MS and B4JH8MSD and surrogates diluted in samples B4JJ0, B4JH4DL, B4JJ0DL, B4JK2DL, B4JJ4DL, B4JJ7DL and B4JK9DL.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4JH8. Spike recoveries were within the advisory QC limits with the exception of high recovery of both Aroclors 1016 and 1260 in both columns for both the matrix spike and matrix spike duplicate. Replicate RPDs were within the advisory QC limits with the exception of Aroclor 1016 for column CLPPest. Please note that the high recovery of Aroclors 1016 and 1260 are probably due to co-eluting peaks from the high concentration of Aroclor 1254 in the native sample.

The following samples were initially analyzed at dilution: B4JH4 (20x), B4JH5 (5x), B4JH6 (4x), B4JH7 (4x), B4JJ0 (20x), B4JJ3 (5x), B4JJ4 (20x), B4JJ5 (4x), B4JJ6 (4x), B4JJ7 (20x), B4JK2 (20x) and B4JK9 (40x).

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: B4JH2 (5x), B4JH3 (10x), B4JH4 (200x), B4JH5 (50x), B4JH6 (40x), B4JH7 (40x), B4JH8 (8x), B4JH9 (4x), B4JJ0 (200x), B4JJ1 (10x), B4JJ3 (50x), B4JJ4 (200x), B4JJ5 (40x), B4JJ6 (40x), B4JJ7 (200x), B4JJ8 (10x), B4JJ9 (10x), B4JK0 (10x), B4JK2 (200x) and B4JK9 (400x).

GC/MS confirmation was performed on samples B4JH4, B4JH5, B4JH6, B4JH7, B4JH8, B4JJ0, B4JJ3, B4JJ4, B4JJ5, B4JJ6, B4JJ7, B4JJ8, B4JJ9, B4JK2 and B4JK9.

Please note that in the GC/MS confirmation, the concentration listed on the spectra were off by at least a factor of 10. This is due to the fact that the GC/MS analysis was

quantitated based the final extract volume of 1mL rather than the actual final volume of 10mL. Also the concentration from the GC/MS analysis were not adjusted for dry weight basis.

No manual integrations were performed.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
01/08/08

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4JE5. Analyses were performed for twenty soil samples that were received on December 21, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that three sample-shipping coolers were received. All the coolers were measured at 3°C.

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4JE5	F1924-01A	A
B4JE5DL	F1924-01ADL	A
B4JE5MS	F1924-01AMS	A
B4JE5MSD	F1924-01AMSD	A
B4JF3	F1924-02A	A
B4JF3DL	F1924-02ADL	A
B4JF4	F1924-03A	A
B4JF4DL	F1924-03ADL	A
B4JF5	F1924-04A	A
B4JF5DL	F1924-04ADL	A
B4JF6	F1924-05A	A
B4JF6DL	F1924-05ADL	A
B4JF7	F1924-06A	A
B4JF7DL	F1924-06ADL	A
B4JF8	F1924-07A	A
B4JF8DL	F1924-07ADL	A
B4JF9	F1924-08A	A
B4JF9DL	F1924-08ADL	A
B4JG0	F1924-09A	A
B4JG0DL	F1924-09ADL	A
B4JG1	F1924-10A	A
B4JG1DL	F1924-10ADL	A
B4JG2	F1924-11A	A
B4JG2DL	F1924-11ADL	A
B4JG3	F1924-12A	A
B4JG3DL	F1924-12ADL	A
B4JG4	F1924-13A	A
B4JG4DL	F1924-13ADL	A
B4JG5	F1924-14A	A
B4JG5DL	F1924-14ADL	A

B4JG6	F1924-15A	A
B4JG6DL	F1924-15ADL	A
B4JG7	F1924-16A	A
B4JG7DL	F1924-16ADL	A
B4JG8	F1924-17A	A
B4JG9	F1924-18A	A
B4JH0	F1924-19A	A
B4JH1	F1924-20A	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = Lower value of two Conc
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception of surrogates diluted in samples B4JF4, B4JF7DL, B4JF8DL, B4JF9DL, B4JG5DL, B4JG6DL, B4JG7DL and B4JF4DL.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4JE5. Spike recoveries were within the advisory QC limits with the exception of high recovery of Aroclor 1260 in column CLPPest and high recovery of both Aroclors in column CLPPestII. Replicate RPDs were within the advisory QC limits with the exception of Aroclor 1260 in column CLPPest and both Aroclors in column CLPPestII. Please note that the high recovery of Aroclors 1016 and 1260 are probably due to co-eluting peaks from the high concentration of Aroclor 1254 in the native sample.

The following samples were initially analyzed at dilution: B4JF4 (100x), B4JF6 (4x), B4JF7 (10x), B4JF8 (10x), B4JF9 (10x), B4JG0 (3x), B4JG5 (10x), B4JG6 (10x) and B4JG7 (10x).

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: B4JE5 (10x), B4JF3 (4x), B4JF4 (1000x), B4JF5 (10x), B4JF6 (40x), B4JF7 (100x), B4JF8 (100x), B4JF9 (100x), B4JG0 (30x), B4JG1 (10x), B4JG2 (10x), B4JG3 (10x), B4JG4 (10x), B4JG5 (100x), B4JG6 (100x) and B4JG7 (100x).

Per the Region, GC/MS confirmation is not required for those samples in which the Aroclor concentration is greater than 3300ug/Kg.

Manual integration was performed on the following:
AR12421H1: Aroclor 1242 in the rear column due to M4
B4JE5MS: Aroclor 1260 in the rear column due to M2
B4JE5MSD: Aroclor 1260 in the rear column due to M2.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
01/09/08

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4J91. Analyses were performed for twenty soil samples that were received on December 20, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that two sample-shipping coolers were received. The coolers were measured at 1°C and 3°C.

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4J91	F1911-01A	A
B4J91DL	F1911-01ADL	A
B4J92	F1911-02A	A
B4J92DL	F1911-02ADL	A
B4J93	F1911-03A	A
B4J93DL	F1911-03ADL	A
B4J94	F1911-04A	A
B4J94DL	F1911-04ADL	A
B4J95	F1911-05A	A
B4J96	F1911-06A	A
B4J96DL	F1911-06ADL	A
B4J97	F1911-07A	A
B4J97DL	F1911-07ADL	A
B4J98	F1911-08A	A
B4J98DL	F1911-08ADL	A
B4J99	F1911-09A	A
B4J99DL	F1911-09ADL	A
B4JA0	F1911-10A	A
B4JA0DL	F1911-10ADL	A
B4JA0MS	F1911-10AMS	A
B4JA0MSD	F1911-10AMSD	A
B4JA1	F1911-11A	A
B4JA1DL	F1911-11ADL	A
B4JA2	F1911-12A	A
B4JA2DL	F1911-12ADL	A
B4JA3	F1911-13A	A
B4JA3DL	F1911-13ADL	A
B4JA4	F1911-14A	A
B4JA4DL	F1911-14ADL	A
B4JA5	F1911-15A	A

B4JA5DL	F1911-15ADL	A
B4JA6	F1911-16A	A
B4JA7	F1911-17A	A
B4JA7DL	F1911-17ADL	A
B4JA8	F1911-18A	A
B4JA8DL	F1911-18ADL	A
B4JA9	F1911-19A	A
B4JA9DL	F1911-19ADL	A
B4JB0	F1911-20A	A
B4JB0DL	F1911-20ADL	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right))}\right)$$

where: Amt = Lower value of two Conc
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception of low recovery of decachlorobiphenyl in one column for sample B4JA3 and surrogates diluted in samples B4J92DL, B4J93DL, B4J97DL, B4J93, B4J97, B4J99, B4JA0, B4J99DL, B4JA0DL, B4JA2DL, B4JA0MS and B4JA0MSD.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4JA0. Spike recoveries were within the advisory QC limits with the exception of high recovery of both Aroclor 1016 and Aroclor 1260 in both columns for the matrix spike and matrix spike duplicate. Replicate RPDs were not within the advisory QC limits for either Aroclor in either column. Please note that the high recovery of Aroclors 1016 and 1260 are probably due to co-eluting peaks from the high concentration of Aroclor 1254 in the native sample. Please note that the matrix spike and matrix spike duplicate were analyzed at 8x dilution.

The following samples were initially analyzed at dilution: B4J92 (10x), B4J93 (4x), B4J94 (4x), B4J97 (5x), B4J99 (10x), B4JA0 and its associated matrix spike and matrix spike duplicate (80x), B4JA2 (4x), B4JA4 (2x), B4JA7 (2x), B4JA8 (2x) and B4JA9 (4x).

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: B4J91 (8x), B4J92 (100x), B4J93 (40x), B4J94 (40x), B4J96 (5x), B4J97 (50x), B4J98 (10x), B4J99 (100x), B4JA0 (80x), B4JA1 (8x), B4JA2 (40x), B4JA3 (10x), B4JA4 (20x), B4JA5 (5x), B4JA7 (20x), B4JA8 (20x), B4JA9 (40x) and B4JB0 (10x).

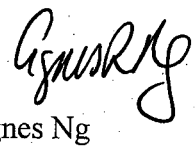
Per the Region, GC/MS confirmation is not required for those samples in which the Aroclor concentration is greater than 3300ug/Kg.

Manual integration was performed on Aroclor 1242 in the rear column for AR12421H1 due to M4.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.



Agnes Ng
CLP Project Manager
01/09/08

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Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4JH2

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4JH2	08) B4JH8MS	15) B4JJ5	22) B4JK9
02) B4JH3	09) B4JH8MSD	16) B4JJ6	
03) B4JH4	10) B4JH9	17) B4JJ7	
04) B4JH5	11) B4JJ0	18) B4JJ8	
05) B4JH6	12) B4JJ1	19) B4JJ9	
06) B4JH7	13) B4JJ3	20) B4JK0	
07) B4JH8	14) B4JJ4	21) B4JK2	

First Sample in SDG	Last Sample in SDG
B4JH2	B4JK9
First Sample Receipt Date	Last Sample Receipt Date
12/21/2007	12/21/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature _____ Date 12/31/2007

Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4JE5

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4JE5	08) B4JF7	15) B4JG4	22) B4JH1
02) B4JE5MS	09) B4JF8	16) B4JG5	
03) B4JE5MSD	10) B4JF9	17) B4JG6	
04) B4JF3	11) B4JG0	18) B4JG7	
05) B4JF4	12) B4JG1	19) B4JG8	
06) B4JF5	13) B4JG2	20) B4JG9	
07) B4JF6	14) B4JG3	21) B4JH0	

First Sample in SDG	Last Sample in SDG
B4JE5	B4JH1
First Sample Receipt Date	Last Sample Receipt Date
12/21/2007	12/21/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature AgnusRNg Date 12/27/2007

Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4J91

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4J91	08) B4J98	15) B4JA3	22) B4JB0
02) B4J92	09) B4J99	16) B4JA4	
03) B4J93	10) B4JA0	17) B4JA5	
04) B4J94	11) B4JA0MS	18) B4JA6	
05) B4J95	12) B4JA0MSD	19) B4JA7	
06) B4J96	13) B4JA1	20) B4JA8	
07) B4J97	14) B4JA2	21) B4JA9	

First Sample in SDG	Last Sample in SDG
B4J91	B4JB0
First Sample Receipt Date	**Last Sample Receipt Date**
12/20/2007	12/20/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature _____ Date 12/24/2007

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Monday, December 31, 2007 1:26 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Non-sampler issues | FINAL

Agnes,

Summary Start
Issue: Samples tags were not received with the samples.
Resolution: In accordance with previous direction from Region 2, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the samples. Region 2 does not require sample tags.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Monday, December 31, 2007 1:14 PM
To: Von Moll, Kristin
Subject: FW: Case 37088

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Monday, December 31, 2007 12:07 PM
To: Rudolph, Elizabeth
Subject: Case 37088

Hi Beth,

Tags were not received with the samples.

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499
****

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Monday, December 31, 2007 1:27 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Non-sampler issues | FINAL

Agnes,

Summary Start
Issue: Samples tags were not received with the samples.
Resolution: In accordance with previous direction from Region 2, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the samples. Region 2 does not require sample tags.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Monday, December 31, 2007 1:14 PM
To: Von Moll, Kristin
Subject: FW: Case 37073

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Monday, December 31, 2007 12:08 PM
To: Rudolph, Elizabeth
Subject: Case 37073

Hi Beth,

Tags were not received with the samples.

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Tuesday, January 08, 2008 2:33 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Laboratory problems | FINAL

Agnes,

Summary Start
Issue: The samples are pretty loaded with Aoclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. The laboratory would like to know if GC/MS confirmation is required for all of the samples.
Resolution: Per Region 2, GC/MS confirmation is not required. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Michael.Adly@epamail.epa.gov [mailto:Michael.Adly@epamail.epa.gov]

Sent: Tuesday, January 08, 2008 2:20 PM
To: Von Moll, Kristin
Cc: Rudolph, Elizabeth; feranda.jennifer@epa.gov
Subject: Re: NEW ISSUE #1 | Case 37088 | Lab MITKEM | Issue Laboratory problems

Kristin,

Please advise the lab that GC/MS confirmation is not required.

Thanks.

Adly A. Michael
Region 2 - HWSB - HWSS
Phone: (732) 906-6161
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
01/08/2008 12:20 PM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #1 | Case 37088 | Lab MITKEM | Issue Laboratory problems

Hi Adly,

MITKEM is reporting the following issue regarding Case 37088.

Issue: The samples are pretty loaded with Aoclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. The laboratory would like to know if GC/MS confirmation is required for all of the samples.

Please advise on how the laboratory should proceed.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

written agreement or government initiative expressly permitting the use of e-mail for such purpose.

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Tuesday, January 08, 2008 12:00 PM
To: Von Moll, Kristin
Subject: Case 37088

Hi Kristin,

I am writing in regards to GC/MS confirmation. The samples are pretty loaded with Aroclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. Do we have to do GC/MS confirmation for all these samples?

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499
****

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Monday, December 31, 2007 1:27 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Non-sampler issues | FINAL

Agnes,

Summary Start
Issue: Samples tags were not received with the samples.
Resolution: In accordance with previous direction from Region 2, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the samples. Region 2 does not require sample tags.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Monday, December 31, 2007 1:14 PM
To: Von Moll, Kristin
Subject: FW: Case 37073

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Monday, December 31, 2007 12:08 PM
To: Rudolph, Elizabeth
Subject: Case 37073

Hi Beth,

Tags were not received with the samples.

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Tuesday, January 08, 2008 2:33 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Laboratory problems | FINAL

Agnes,

Summary Start
Issue: The samples are pretty loaded with Aoclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. The laboratory would like to know if GC/MS confirmation is required for all of the samples.
Resolution: Per Region 2, GC/MS confirmation is not required. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Michael.Adly@epamail.epa.gov [mailto:Michael.Adly@epamail.epa.gov]

Sent: Tuesday, January 08, 2008 2:20 PM
To: Von Moll, Kristin
Cc: Rudolph, Elizabeth; feranda.jennifer@epa.gov
Subject: Re: NEW ISSUE #1 | Case 37088 | Lab MITKEM | Issue Laboratory problems

Kristin,

Please advise the lab that GC/MS confirmation is not required.

Thanks.

Adly A. Michael
Region 2 - HWSB - HWSS
Phone: (732) 906-6161
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
01/08/2008 12:20 PM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #1 | Case 37088 | Lab MITKEM | Issue Laboratory problems

Hi Adly,

MITKEM is reporting the following issue regarding Case 37088.

Issue: The samples are pretty loaded with Aoclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. The laboratory would like to know if GC/MS confirmation is required for all of the samples.

Please advise on how the laboratory should proceed.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

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written agreement or government initiative expressly permitting the use of e-mail for such purpose.

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Tuesday, January 08, 2008 12:00 PM
To: Von Moll, Kristin
Subject: Case 37088

Hi Kristin,

I am writing in regards to GC/MS confirmation. The samples are pretty loaded with Aroclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. Do we have to do GC/MS confirmation for all these samples?

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499
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